

Section 10

FINAL SUPPORTING STATEMENT  
FOR  
ENVIRONMENTAL QUALIFICATION OF ELECTRIC EQUIPMENT IMPORTANT TO  
SAFETY FOR NUCLEAR POWER PLANTS

10 CFR 50.49

DESCRIPTION OF THE INFORMATION COLLECTION

Section 50.49 contains the following information collections:

Section 50.49(a) requires applicants and licensees of nuclear power plants, other than a nuclear power plant for which 50.82(a)(1) certifications have been submitted, to establish a program for qualifying the electric equipment important to safety as defined in 50.49. Since all licensees have completed this requirement and no new applications for commercial nuclear power plants are expected to be docketed in the foreseeable future, no further collection of information is anticipated under this section of the regulation.

Section 50.49(d) requires applicants and licensees to prepare a list of electric equipment important to safety, and include the performance specifications under conditions existing during and following design basis accidents, the electric characteristics for which performance under specified conditions can be ensured, and the environmental conditions in which it must operate. Applicants and licensees must keep the list and information in the file current. All licensees have prepared lists of equipment and performance specifications, and future information collection under this section of the regulation is only required to the degree it is necessary for keeping the information current.

Section 50.49(f) requires each item of electric equipment important to safety to be qualified by one of four specified methods all with a supporting analysis to show that the equipment to be qualified is acceptable. Licensees have completed this requirement for existing plant equipment. However, this requirement remains active for qualification of new equipment installations and for replacement equipment that fall under the scope of this regulation.

Section 50.49(g) requires, by May 20, 1983, each holder of an operating license issued prior to February 22, 1983, to identify the electric equipment important to safety already qualified and submit a schedule for either qualifying or replacing the remaining electric equipment important to safety. Since this requirement has been completed by all licensees, no further collection of information is required under this section of the regulation.

Section 50.49(h) requires each licensee to notify the NRC of any significant equipment qualification problem that may require extension of the completion date, provided pursuant to 50.49(g), within 60 days of its discovery. Since this requirement has been completed by all licensees, no further collection of information is required under this section of the regulation. Section 50.49(i) requires applicants for operating licenses granted after February 22, 1983, but prior to November 30, 1985, to perform and submit an analysis, for NRC consideration prior to

granting an operating license, to ensure that the plant can be safely operated pending completion of equipment qualification required by 50.49. Since this requirement has been completed by all licensees, no further collection of information is required under this section of the regulation.

Section 50.49(j) requires that a record of the qualification, including documentation required by 50.49(d), be maintained in an auditable form for the entire period during which the covered item is installed or stored for future use in the nuclear power plant. This is required to permit verification that each item of electric equipment important to safety is qualified for its application and meets its specified performance requirements when it is subjected to the conditions predicted to be present when it must perform its safety function up to the end of its qualified life.

Section 50.49(l) requires replacement equipment to be qualified in accordance with the provisions of 10 CFR 50.49 unless there are sound reasons to the contrary. Therefore, unless there is suitable justification for some alternate course of action, new equipment installations and replacement equipment that fall under the scope of 10 CFR 50.49 must be qualified in accordance with 10 CFR 50.49 requirements, including the documentation requirements of 50.49(d), (f) and (j). The licensee maintains any justification for an alternative course of action on site, and the justification is available for inspection as part of the inspection procedure.

#### A. JUSTIFICATION

##### 1. Need for and Practical Utility of the Collection of Information

Nuclear power plant electric equipment important to safety must be able to perform its safety functions throughout its installed life. Records that demonstrate equipment performance capabilities must be maintained in an auditable form to permit verification that each item important to safety is qualified. These records are maintained for the entire period during which the equipment item is installed in the plant or is stored for future use.

##### 2. Agency Use of Information

The reports and records required by 10 CFR 50.49 allow NRC to periodically assess whether 104 operating plants meet requirements pertaining to environmental qualification of electrical equipment. This information has been used by licensees to address various equipment qualification issues over time, to confirm equipment design adequacy when making plant changes, and when performing plant design reviews and assessing vulnerabilities that are periodically identified. This information has also been used by NRC personnel when assessing equipment design adequacy during periodic routine and reactive inspections.

##### 3. Reduction of Burden Through Information Technology

There is no legal obstacle to the use of information technology. Moreover, NRC encourages its use; however, at the current time, no responses are submitted electronically.

4. Effort to Identify Duplication and Use Similar Information

The Information Requirements Control Automated System (IRCAS) was searched for duplication. None was found. There is no source for the required information other than applicants/licensees of nuclear power plants.

5. Effort to Reduce Small Business Burden

This requirement only affects nuclear power reactor applicants/ licensees and, therefore, does not affect small businesses.

6. Consequences to Federal Program or Policy Activities if the Collection is Not Conducted or is Conducted Less Frequently

The provisions of 10 CFR Section 50.49 require the applicant/licensee to set up a program for the environmental qualification (EQ) of electric equipment, submit a safety analysis report, and maintain equipment qualification records for the installed life of the component. If this information was not required to be assembled and maintained, there would be no record of the basis for equipment qualification and in particular, there would be no record of what the boundaries of qualification are for the equipment of a particular plant. Establishing and maintaining the specified information is needed to provide assurance of equipment operability in the most severe environments that are postulated to exist at each commercial nuclear power plant.

There is no specific frequency associated with the collection and maintenance of environmental qualification information per se. Following the initial certification efforts, the information is reviewed and enhanced and new qualification information is gathered by the licensee on an "as needed" basis depending on specific plant circumstances that arise, equipment vulnerabilities that are identified, plant upgrades, and the periodic replacement of components.

7. Circumstances which Justify Variation from OMB Guidelines

The records required by 10 CFR 50.49(d) and (j) are required to be maintained for the life of the component so that the NRC and the licensees can periodically assess and determine if equipment important to safety at nuclear power plants meets specified performance requirements.

8. Consultation Outside the NRC

The opportunity for public comment was published in the Federal Register on August 29, 2003 (68 FR 52063). No comments were received.

9. Payment or Gift to Respondents

Not applicable.

10. Confidentiality of Information

Confidential or proprietary information is handled in accordance with 10 CFR 2.790 of the NRC's regulations.

11. Justification for Sensitive Questions

This regulation does not request sensitive information.

12. Estimated Industry Burden and Burden Hour Cost

Future information collection that is required to be conducted under this regulation is relatively minor and situational dependent, pertaining primarily to the maintenance and upkeep of existing equipment qualification records, as equipment ages, with some effort required for establishing new records, as equipment is replaced, and for new equipment installations. Those sections of the regulation that are currently active in this regard are 50.49(d), (f), and (j). On the average, staff estimates that collection and maintenance of information as required under this regulation will require on the order of about 2,080 hours per year per licensee for a total industry burden of 216,320 hours (2,080 hrs x 104). Using a cost of \$156/hour, this amounts to \$324,480 per year per licensee. This results in a total cost of about \$33,745,920 for the regulated nuclear industry (i.e., 104 power plants).

13. Estimate of Other Additional Costs

Based on the number of pages maintained for a typical clearance, the records storage cost has been determined to be equal to .0004 percent of the recordkeeping burden cost. Therefore, the storage cost for this clearance is estimated to be \$ 13,498 (216,320 hours x \$156 x .0004).

14. Estimated Annualized Cost to the Federal Government

Because the information that is required to be established and maintained per 10 CFR 50.49 requirements is kept by the licensees and made available for NRC review during routine site inspections and as the need arises, the total annual cost to the Federal government is negligible.

15. Reasons for Changes in Burden or Cost

The cost per licensee increased from \$266,240 to \$324,480 per year due to an increase of the burden cost from \$141.00 per hour to \$156 per hour.

16. Publication for Statistical Use

This information collection is not used for statistical purposes.

17. Reason for Not Displaying the Expiration Date

The requirement is contained in a regulation. Amending the Code of Federal Regulations to display information that, in an annual publication, could become obsolete would be unduly burdensome and too difficult to keep current.

18. Exceptions to the Certification Statement

None.

B. COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL METHODS

Not applicable.